

Impax's SmartCarbon[™] strategy

January 2018 For professional investors only



Impax seeks to help asset owners manage climate change risk in equity portfolios using a "smart beta", scenariosbased approach. We model the impact on company cash flows of potential future government intervention to reduce greenhouse gas emissions and replace a marketweighted basket of exposed stocks with a new, optimised basket. We also recommend that portfolios are updated twice a year to reflect new risk information.

INVESTMENT RISK: POLICY NOT WEATHER

The Paris Climate Agreement, ratified in November 2016, marked the point where countries around the world committed to limiting the rise in global temperatures to less than two degrees (above pre-industrial levels), a change will require a major shift in the global economy.

We believe that government policy responses to pursue this aim, i.e. interventions to reduce greenhouse gas emissions, are likely within five to ten years; expected changes over this timeframe typically have a significant impact on today's valuations; in contrast, physical risks are likely to disrupt portfolios over 30-40 years.

Policies to reduce emissions of carbon dioxide, the principal greenhouse gas, are typically based on taxation or "cap and trade" schemes. We refer to these generically as "Carbon Pricing."

TYPICAL INVESTOR RESPONSES AND IMPAX'S APPROACH

Asset owners and their advisers have typically adopted one of three approaches in responding to climate change risk. Those who ignore it are increasingly challenged by regulators' signals that this approach is inconsistent with fiduciary responsibility. Those who quickly sell out of fossil fuels need to ensure they are not adding other risks in the process. Finally, some asset owners prefer to continue to evaluate and delay making a decision, potentially waiting for improved analytical tools.

Impax recommends a fourth approach, which is to use scenario analysis re future climate change policy to estimate overvaluation in today's asset prices, and then optimise a standard equity portfolio to take account of this new information. The resulting portfolio maintains full exposure to "low risk" companies and partial exposure to those with "medium risk"; in the latter case, asset owners retain the ability to engage with the management of these companies in order to encourage them to adjust their response to climate change risk.

MEASURING CASH FLOW IMPAIRMENT: A BETTER TOOL THAN CARBON FOOTPRINTING

One of the most common methodologies currently employed by investors in attempts to understand climate change risk is carbon footprinting. This approach embeds the assumption that those companies with higher carbon footprints will see their share prices decline due to future climate change policy. We believe this analysis to be flawed as it is not forward looking and ignores a company's pricing power, i.e. its ability to pass on higher costs to consumers. We believe a more effective approach is to model the impact of a range of Carbon Price scenarios on the future cash flows of companies with weak pricing power. Although this requires detailed knowledge of the sectors and companies under review, we believe it provides a more accurate measure of climate change risk.

SCENARIO-BASED ANALYSIS

We calculate asset level value at risk ("VAR") under a range of Carbon Pricing scenarios that consider a wide range of policy responses which vary in their severity, timeframe and probability.

We assume that this VAR is not reflected in today's asset prices, and therefore that the valuation anomalies can inform the appropriate level of re-allocation of each stock. There are strong indications that today's energy stock prices do not account for the risk of such future government intervention. The demise in the value of US coal stocks between 2011 and 2016 is supportive of our assumption that market prices of energy stocks are inefficient.

Our scenarios-based approach to climate change risk evaluation is consistent with the recommendations of the FSB Taskforce on Climate-Related Financial Disclosures (June 2017)¹.

RISK-BASED SECTOR APPROACH

Our analysis shows that companies in three economic sectors typically demonstrate low levels of pricing power, and that the analysis and management of risk in these sectors (only) produces a robust result for incorporating climate change risk across a full portfolio e.g. one based on the MSCI World Index. Our SmartCarbon™ model was launched in September 2015 with risk modelled in the Energy sector only. As of March 2018, the model has been extended to include Utilities; we expect to extend our analysis to cover the third sector, Basic Materials, later in 2018.